

Appl. No. 10/687,671
Amdt. dated March 07, 2007
Reply to Office action of December 07, 2006

Amendments to the Specification

Please amend the paragraphs in the specification as follows:

【 Paragraph on page 1, line 7 】

- 5 The present application is related to the co-pending application entitled
“Demodulation apparatus for a network transceiver and method thereof”, ~~Ser. No.~~
~~UNKNOWN Application No. 10/687,771~~, filed on the same day as the present application
and assigned to the same assignee, the contents of which are herein incorporated by
reference.

10 【 Paragraph on page 3, lines 13, 15 and 20 】

- To achieve the objects, a transceiver of a communication system is disclosed. The
transceiver comprises a front-end receiver for receiving a receiving signal and converting
the receiving signal to a first signal with a pre-cursor component and a post-cursor
component, a noise canceller coupled to the front-end receiver ~~[[10]]~~ for generating a
15 second signal through eliminating the noise of the first signal, a Feed-Forward Equalizer
(FFE) coupled to the noise canceller for generating a third signal through eliminating the
pre-cursor component in the second signal according to a transfer function including a
plurality of adjustable constants, wherein the adjustable constants ~~includes~~ include a
main-tap and the value of the main-tap is predetermined, and a decoding system coupled
20 to the FFE for decoding the third signal and eliminating the post-cursor component in the
third signal.

【 Paragraph on pages 4 and 5, lines 18 and 20 of page 4 】

- FIG. 2 shows a preferred embodiment of a receiver for a network transceiver
according to the present invention. In FIG. 2, the receiver includes a front-end receiver
25 10, a feed-forward equalizer (FFE) 20, a noise canceller 30, a timing recovery (TR) 40
and a decoding system 50. The front-end receiver 10 is for receiving a signal and
converting the signal to a first signal in digital form with a pre-cursor component and a

Appl. No. 10/687,671
 Amdt. dated March 07, 2007
 Reply to Office action of December 07, 2006

post-cursor component. The noise canceller 30 is coupled to the front-end receiver 10 for eliminating the noise of the first signal and thus generating a second signal. The FFE 20 is coupled to the noise canceller 30 for eliminating the pre-cursor component in the second signal and thus generating a third signal. The decoding system 50 is coupled to the FFE 20 for decoding the third signal and eliminating the post-cursor component in the third signal.

【 Paragraph on page 7, line 10】

The FFE 20 is coupled to the noise canceller 30 for generating a third signal through eliminating the pre-cursor component of the second signal. The FFE 20 includes an adaptive filter 21 and a digital auto-gain controller (DAGC) 22. The adaptive filter 21 is a finite impulse response filter. The circuit diagram of the adaptive filter 21 is shown in FIG. 4. In this embodiment, a transfer function of the adaptive filter 21 is $C_0 Z^3 + C_1 Z^2 + C_2 Z^1 + 1 + C_4 Z^{-1} + C_3 Z^{-2} + C_6 Z^{-3}$, where C_0 , C_1 , C_2 , C_4 , C_3 and C_6 are adjustable constants and Z represents a delay element. The main-tap is set to be 1. Through setting the main-tap to be a predetermined value, preferably, 1, the circuit complexity of the FFE 20 can be simplified. In addition, a right-hand tap adjacent to the main-tap C_4 is set to be 0.5 according to the simulation and the practical experiment. The DAGC 22 is coupled to the adaptive filter 21 for adjusting the magnitude of the signal outputted from the adaptive filter 21 to meet the operating range requirement of the decoding system 50. The adjustment of the DAGC 22 is based on the constants determined by the adaptive filter 21. Through setting the main-tap to be 1 and the right-hand tap adjacent to the main-tap C_4 to be 0.5, the output signal of the DAGC 22 must do the corresponding adjustment.